



CALS TEST NETWORK

# CTN Test Report

92-017

AFTB-ID

92-021



## Technical Publication Transfer Test

## Using Resource Data Consultants



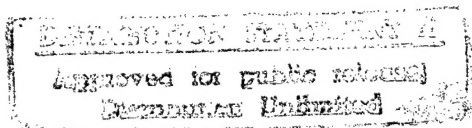
MIL-R-28002 (Raster)



## Quick Short Test Report



20 November 1992



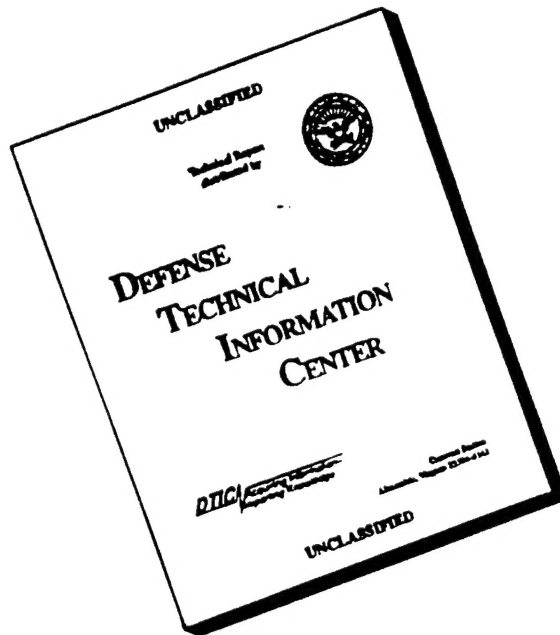
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CTN Test Report  
92-017

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Technical Publication Transfer  
Using Resource Data Consultants

MIL-R-28002 (Raster)

Quick Short Test Report

20 November 1992

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## **1. Introduction**

### **1.1 Background**

The DoD Computer-aided Acquisition and Logistics Support (CALS) Test Network (CTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The CTN is a DoD-sponsored confederation of voluntary participants from industry and government managed by the Air Force Material Command.

The primary objective of the CTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards, formal and informal. Formal tests are large, comprehensive tests that follow a written test plan, require specific authorization from DoD, and may take months to prepare, execute, and report.

Informal tests are used by the CTN technical staff to broaden the testing base by including representative samples of the many systems and applications used by CTN participants. They also allow the CTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and to respond, in a timely manner, to the many requests for help that come from participants. Participants take part voluntarily and are benefited by receiving an evaluation of their latest implementation (interpretation) of the standards, interacting with the CTN technical staff, gaining experience in use of the standards, and developing increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

## 1.2 Purpose

The purpose of the informal test reported in this QSTR was to analyze **Resource Data Consultants'** (REDCONS) interpretation and use of the CALS Standards in transferring technical publications data. REDCON used its CALS Technical Data Interchange System to produce data in accordance with the standards and delivered it to the CTN technical staff on a 9-track magnetic tape.



## 2. Test Parameters

**Test Plan:** AFTB 92-21

**Date of Evaluation:** 20 March 1992

**Evaluator:** George Elwood  
Air Force CALS Test Bed  
AFMC/ENCT  
4027 Colonel Glenn Hwy  
Suite 200  
Dayton, OH 45431-1601

**Data Originator:** Resource Data Consultants  
Alvin R. Miles  
655 E. Medical Dr.  
Suite 150  
Bountiful, UT 84010

**Data Description:** Technical Manual Test  
1 document declaration file  
5 Raster files

**Data Source System:**

Raster

**HARDWARE**

Xerox K5200  
Context Ideal FSS 4016t  
MacIntosh LC  
QualStar 1054 Tape Drive

**SOFTWARE**

HiJaak  
REDCON

**Evaluation Tools Used:**

MIL-STD-1840A (TAPE)  
SUN 3/280  
CTN Tapetools (v1.2.8) UNIX  
Agfa Compugraphics CALS v40.4  
Cheetah Gold 486

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USLynx 1840A Tape Handler  
CTN Tapetools (v1.2.8) DOS

**MIL-R-28002 (Raster)**

SUN 3/60

CTN Raster Tools  
AGFA Compugraphics  
Rosetta Technology Preview V3.1

Cheetah

Inset Systems HiJaak V2.02  
SPC Harvard Graphics V3.0  
Xerox Ventura Publisher

**Standards**

**Tested:**

MIL-STD-1840A  
MIL-R-28002

### **3. 1840A Analysis**

#### **3.1 External Packaging**

The tape arrived at the Air Force Test Bed enclosed in a box IAW ASTM D 3951. The exterior of the box was marked with the magnetic media warning label, MIL-STD-1840A, para. 5.3.1.3.

The tape was enclosed in a barrier bag as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the required label indicating the recording density as required by MIL-STD-1840A, para. 5.3.1. Enclosed in the box was a packing list showing all files that were recorded on the tape.

#### **3.2 Transmission Envelope**

The 9-track tape received by the Air Force Test Bed contained MIL-STD-1840A files. The files were named per the standard conventions.

##### **3.2.1 Tape Formats**

The 1840A Tape was run through the AFTB TAPETOOL utility version 1.2.8. No errors were encountered while evaluating the contents of the tape labels.

A note was reported on the tape label version. MIL-STD-1840A permits the use of both versions three and four. The use of the most current standard should be used and noted.

The tape was also read using Agfa CAPS/CALS read1840A tape utility. No problems were reported. The PC version of TAPETOOL was also used without problem. As a last check, the US Lynx calstape utility was used and no errors were encountered.

##### **3.2.2 Declaration and Header Fields**

No errors were reported in the Document Declaration File or the data header records.

#### **4. IGES Analysis**

No IGES files were included on the tape.

#### **5. SGML Analysis**

No SGML files were included on the tape.

#### **6. Raster Analysis**

All five raster images were checked using the CTN *validg4* utility. No errors were reported by this utility.

The files were converted using Rosetta Technologies *Prepare* and viewed using *Preview*. No problems were encountered. Hard copies of the *Preview* output are included in the appendix to this report. It was noted that file D001R002 contained a fair amount of orphan pixels. These were also noted on the provided copy of this file. A blowup was created of file D001R004 to show the available detail in the file.

The files were then converted using Inset Systems *HiJaak* without problem. The PCX output was checked and with the exception of the orphan pixels in file D001R002, they were all very clean and readable. The files were converted from a PCX format to IMG format using Xerox *Ventura Publisher*. No problems were encountered and the resulting hard copy is included in the appendix to this report.

The raster files included on this tape met current CALS MIL-R-28002 standards.

#### **7. CGM Analysis**

No CGM files were included on the tape.

## 8. Conclusions and Recommendations

In summary, the MIL-STD-1840A tape from Resource Data Consultants was correct. The tape could be read properly using the CTN *TAPETOOL* and the other MIL-STD-1840A tape reading utilities available in the AFTB without problem. No problems were reported by any of the tape utilities available in the Air Force CALS Test Bed.

All five raster images were evaluated and found to meet the current standards. They were converted, displayed and hard copies made without reported problems.

The tape provided by Resource Data Consultants appears to meet the current CALS standards which were evaluated.

## 9. Appendix A - Tape Tool Report Logs

### 9.1 Tape Catalog

CALS Test Network Catalog Evaluation - Version 1.2; Release Number 8

Standards referenced:

- MIL-STD-1840A (1987) - Automated Interchange of Technical Information
- ANSI X3.27 (1987) - File Structure and Labelling of Magnetic Tapes  
for Information Interchange
- ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Fri Mar 20 09:55:42 1992

MIL-STD-1840A File Catalog

File Set Directory: C:\TAPETOOL\SET004

Page: 1

File Name	File Type	Record Format/ Length	Block /Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001R001	Raster	F/00128	02048/000042	Extracted
D001R002	Raster	F/00128	02048/000070	Extracted
D001R003	Raster	F/00128	02048/000044	Extracted
D001R004	Raster	F/00128	02048/000134	Extracted
D001R005	Raster	F/00128	02048/000063	Extracted

Catalog Process terminated normally.

## 9.2 Tape Evaluation Log

CALS Test Network Tape Evaluation - Version 1.2; Release Number 8

Standards referenced:

ANSI X3.27 (1987) - File Structure and Labelling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Fri Mar 20 09:54:53 1992

ANSI Tape Import Log

Rewinding tape to load point...

VOL1CTN1

REDCON

3

Label Identifier: VOL1  
Volume Identifier: CTN1  
Volume Accessibility:  
Owner Identifier: REDCON  
Label Standard Version: 3

\*\*\* NOTE (ANSI X3.27; 8.3.1.8) - The Label Standard Version  
should be 4 to represent the current level of ANSI X3.27.

HDR1D001

CTN1 00010001000100\*\*\*\*\* 000000QuTape 1.65

Label Identifier: HDR1  
File Identifier: D001  
File Set Identifier: CTN1  
File Section Number: 0001  
File Sequence Number: 0001  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: \*\*\*\*\*  
Expiration Date: \*\*\*\*\*  
File Accessibility:  
Block Count: 000000  
Implementation Identifier: QuTape 1.65

HDR2D0204800260

B

00

Label Identifier: HDR2  
Recording Format: D  
Block Length: 02048

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\*\*\*\*\* Tape Mark \*\*\*\*\*

Number of data blocks read = 1.

\*\*\*\*\* Tape Mark \*\*\*\*\*

```
Label Identifier: EOF1
File Identifier: D001
File Set Identifier: CTN1
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: *****
Expiration Date: *****
File Accessibility:
Block Count: 000001
Implementation Identifier: QuTape 1.65
```

EOF2D0204800260 B 00

```
Label Identifier: EOF2
Recording Format: D
Block Length: 02048
Record Length: 00260
Offset Length: 00
```

\*\*\*\*\* Tape Mark \*\*\*\*\*

HDR1D001R001            CTN1   00010002000100\*\*\*\*\* 000000QuTape 1.65

```
Label Identifier: HDR1
File Identifier: D001R001
File Set Identifier: CTN1
File Section Number: 0001
File Sequence Number: 0002
Generation Number: 0001
Generation Version Number: 00
Creation Date: *****
```



Expiration Date: \*\*\*\*\*  
File Accessibility:  
Block Count: 000000  
Implementation Identifier: QuTape 1.65

HDR2F0204800128                      M B                      00

Label Identifier: HDR2  
Recording Format: F  
Block Length: 02048  
Record Length: 00128  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 42.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001R001                      CTN1    00010002000100\*\*\*\*\* 000042QuTape 1.65

Label Identifier: EOF1  
File Identifier: D001R001  
File Set Identifier: CTN1  
File Section Number: 0001  
File Sequence Number: 0002  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: \*\*\*\*\*  
Expiration Date: \*\*\*\*\*  
File Accessibility:  
Block Count: 000042  
Implementation Identifier: QuTape 1.65

EOF2F0204800128                      M B                      00

Label Identifier: EOF2  
Recording Format: F  
Block Length: 02048  
Record Length: 00128  
Offset Length: 00

<<<<< PART OF LOG REMOVED HERE >>>>>

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##### End of Volume CTN1 #####

##### End Of Tape File Set #####

Rewinding tape to load point...

Tape Import Process terminated with 0 error(s), 0 warning(s),  
and 1 note(s).

### 9.3 Tape File Set Validation Log

CALS Test Network File Set Evaluation - Version 1.2; Release Number 8

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

MIL-R-28002 (1989) - Raster Graphics Representation In Binary  
Format, Requirements For

Mon Mar 23 07:29:10 1992

MIL-STD-1840A File Set Evaluation Log

File Set: SET005

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: REDCON 655 E. Medical Drive, Bountiful, UT 84010

srcdocid: NONE

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19920320

dstsys: ATOS System, Hill Air Force Base, UT 84056

dstdocid: NONE

dstrelid: NONE

dtetrm: 19920320

dlvacc: NONE

filcnt: R5

ttlcls: Unclass

doccls: Unclass

doctyp: NONE

docttl: NONE

Found file: D001R001  
Extracting Raster Header Records...  
Evaluating Raster Header Records...

srcdocid: NONE  
dstdocid: NONE  
txtfilid: NONE  
figid: NONE  
srcgph: NONE  
doccls: NONE  
rtype: 1  
rorient: 000,270  
rpelcnt: 002840,003616  
rdensty: 0400  
notes: NONE

Saving Raster Header File: D001R001.HDR  
Saving Raster Data File: D001R001.GR4

<<<<< PART OF LOG REMOVED HERE >>>>>

Evaluating numbering scheme...  
No errors were encountered during numbering scheme evaluation.  
Numbering scheme evaluation complete.

Checking file count...  
No errors were encountered during file count verification.  
File Count verification complete.

No errors were encountered in Document D001.

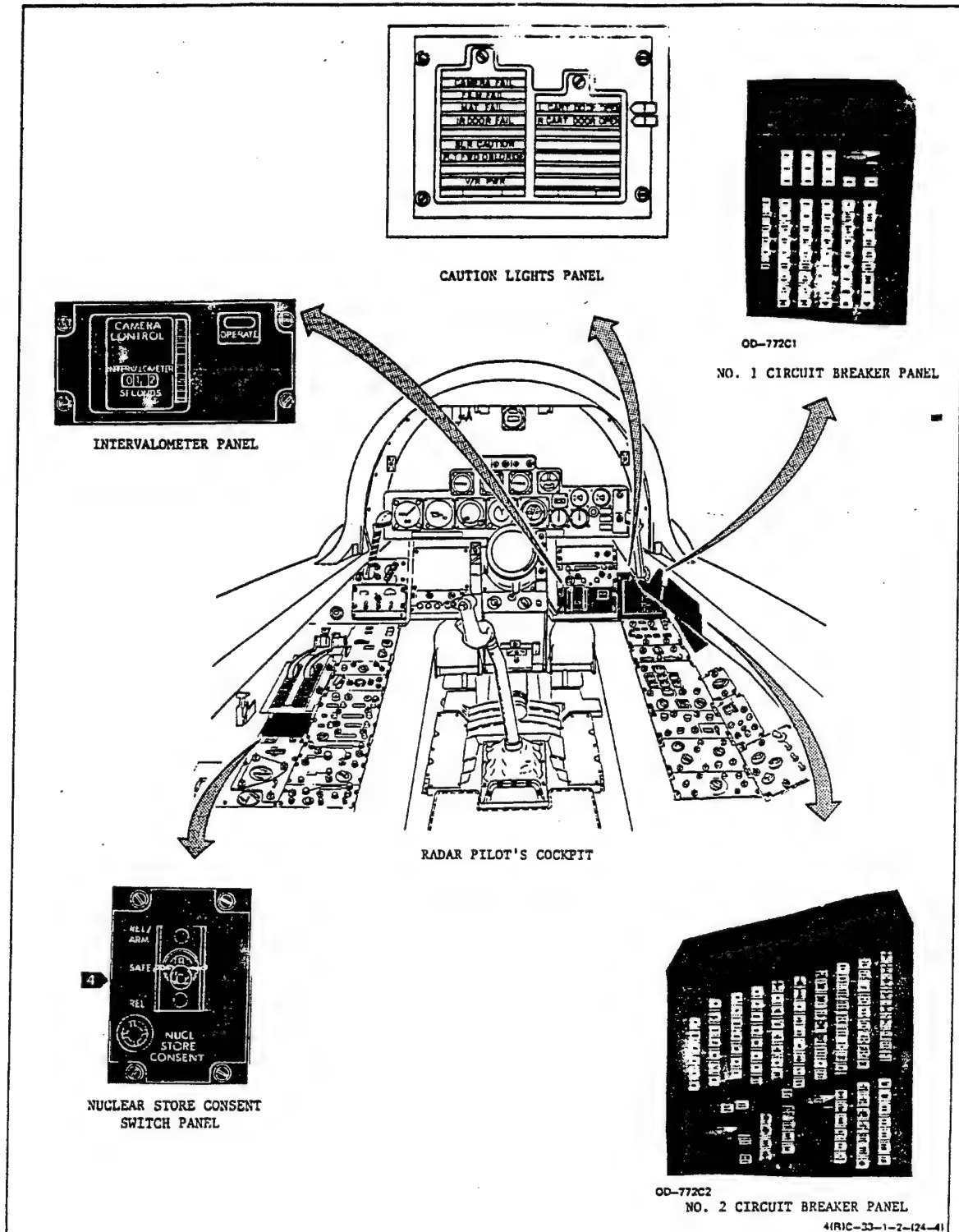
No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

## **10. Appendix B - Raster Files**

### **10.1 Preview**

#### **10.1.1 D001R001**



**10.1.2 D001R002**

T.O. 1F-4(R)C-33-1-2

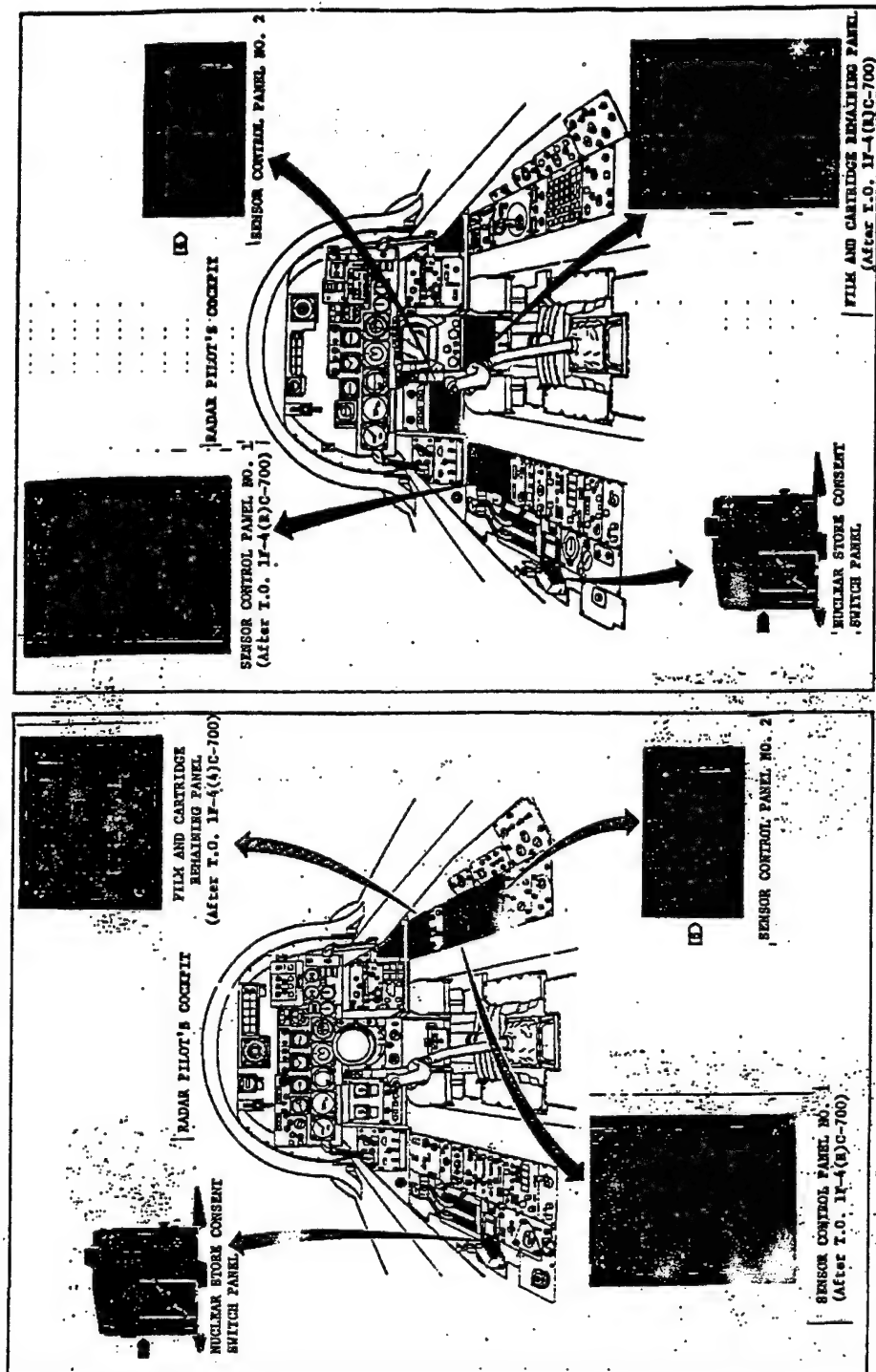
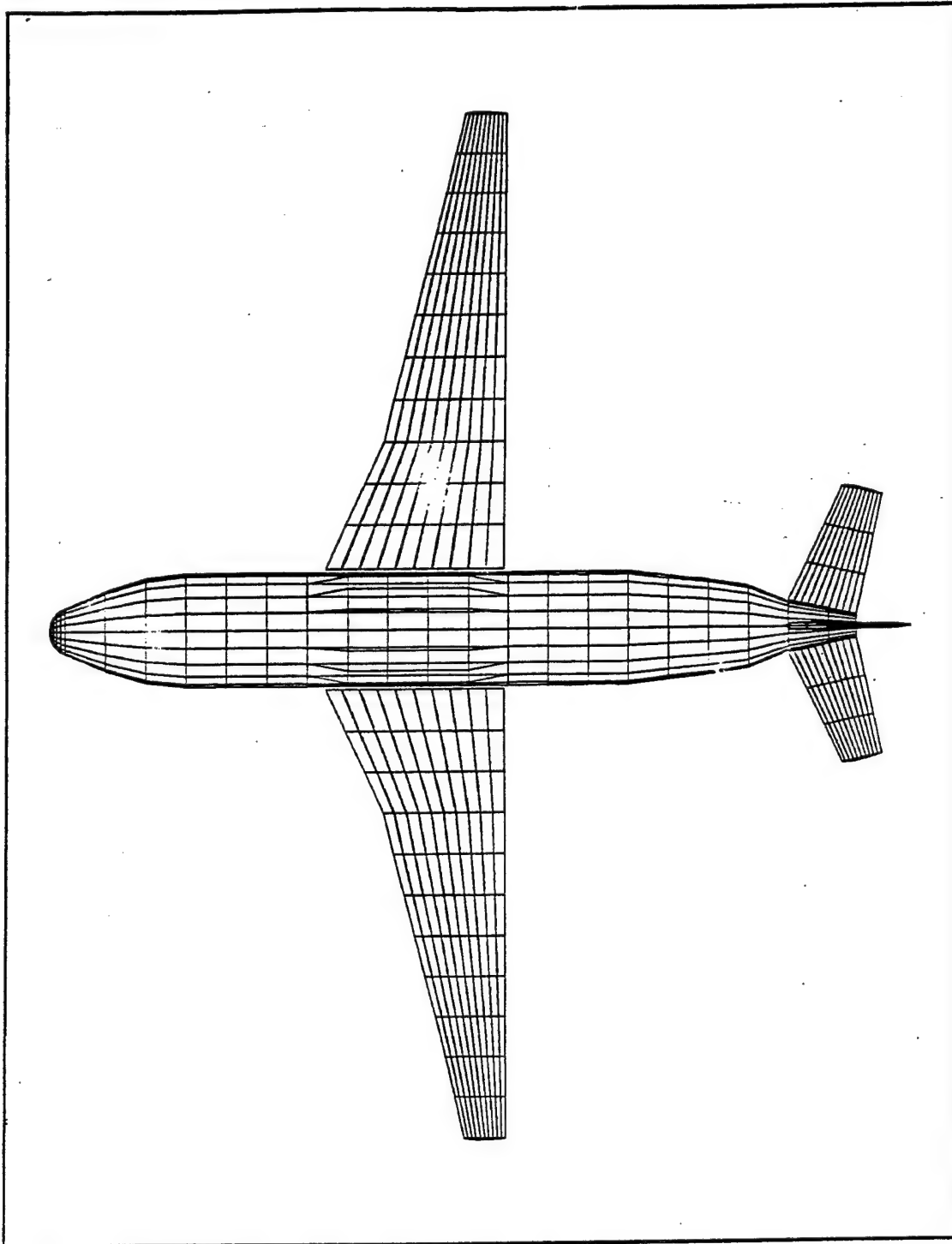


Figure 1-1. Armament Systems Panels, Controls and Indicator (Sheet 3 of 4)

1-8



**10.1.3 D001R003**

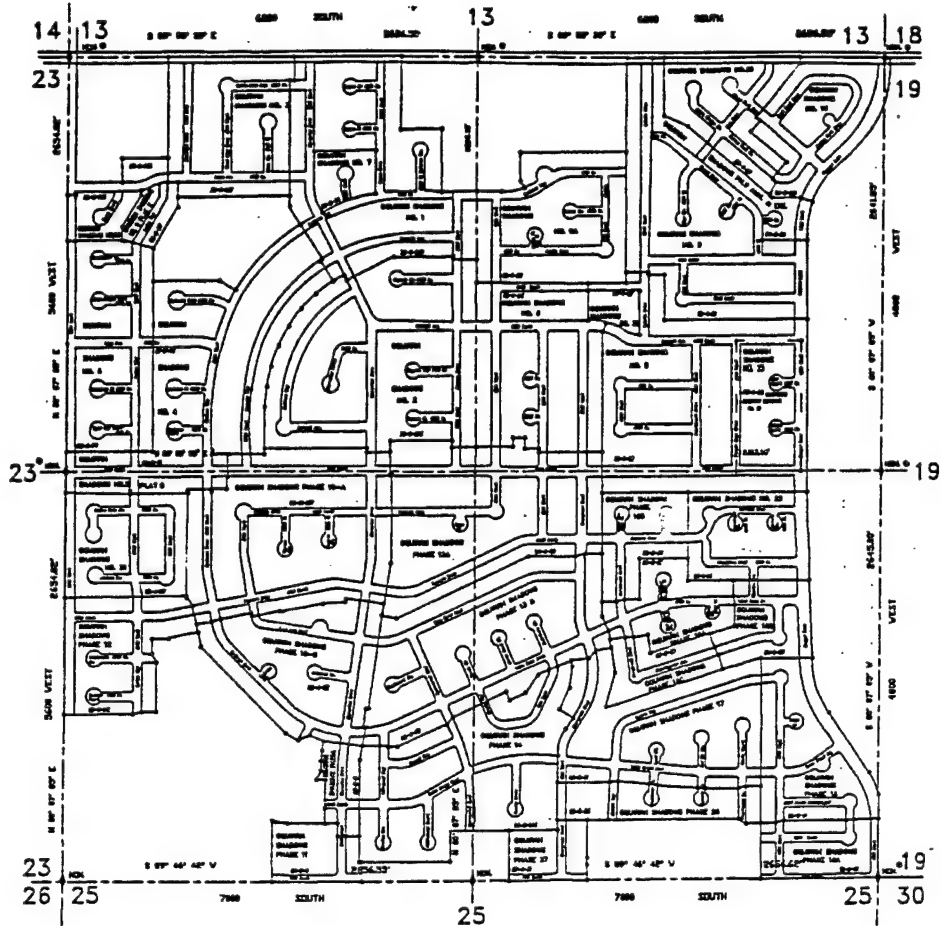


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**10.1.4 D001R004**



SEC 24  
T2S R2W  
AREA REFERENCE PLAT

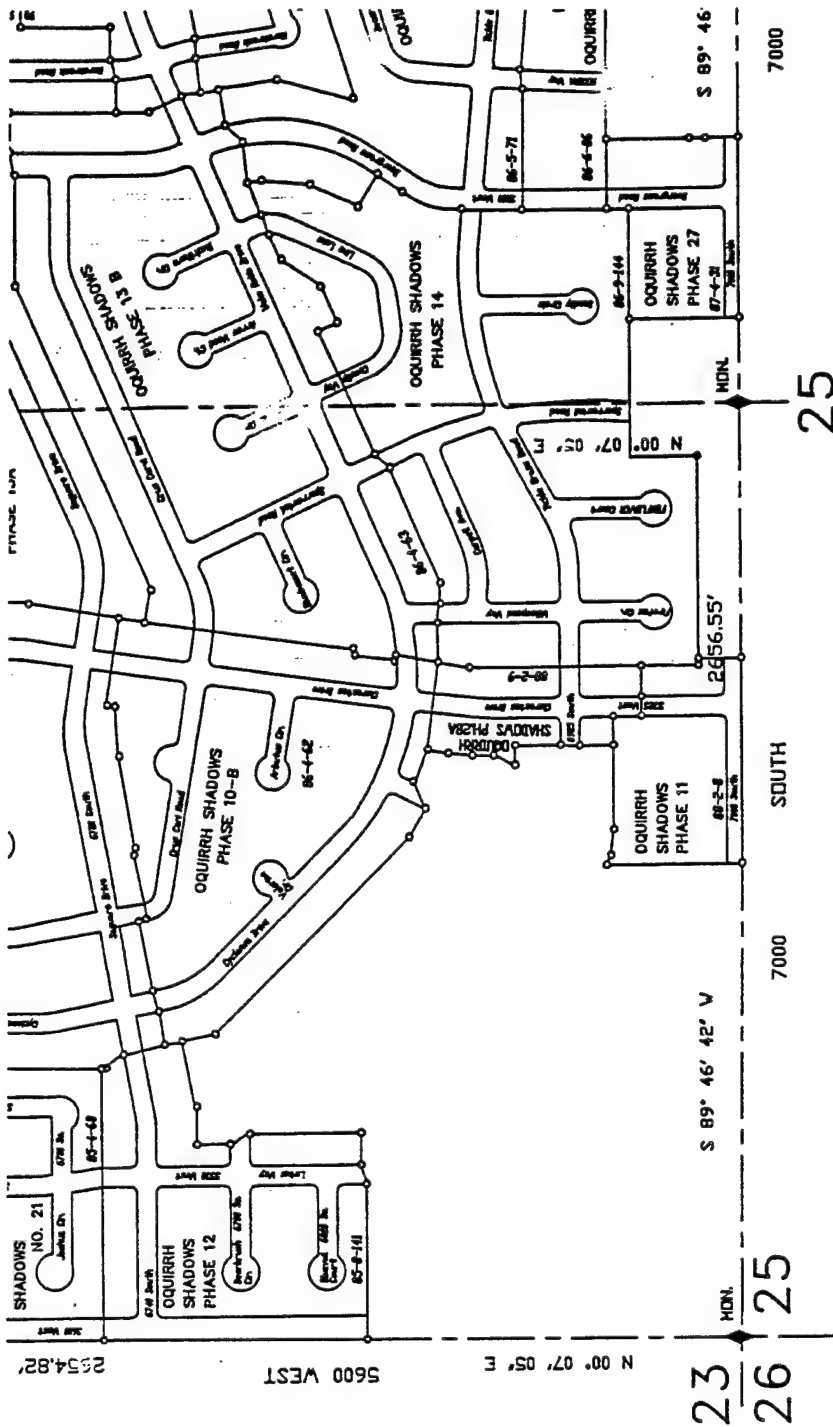
COMPILED BY  
DALE R. HOLT  
SALT LAKE COUNTY SURVEYOR



24-T2S-R2W

24 T2S R2W

**10.1.5 D001R004 - Detail**

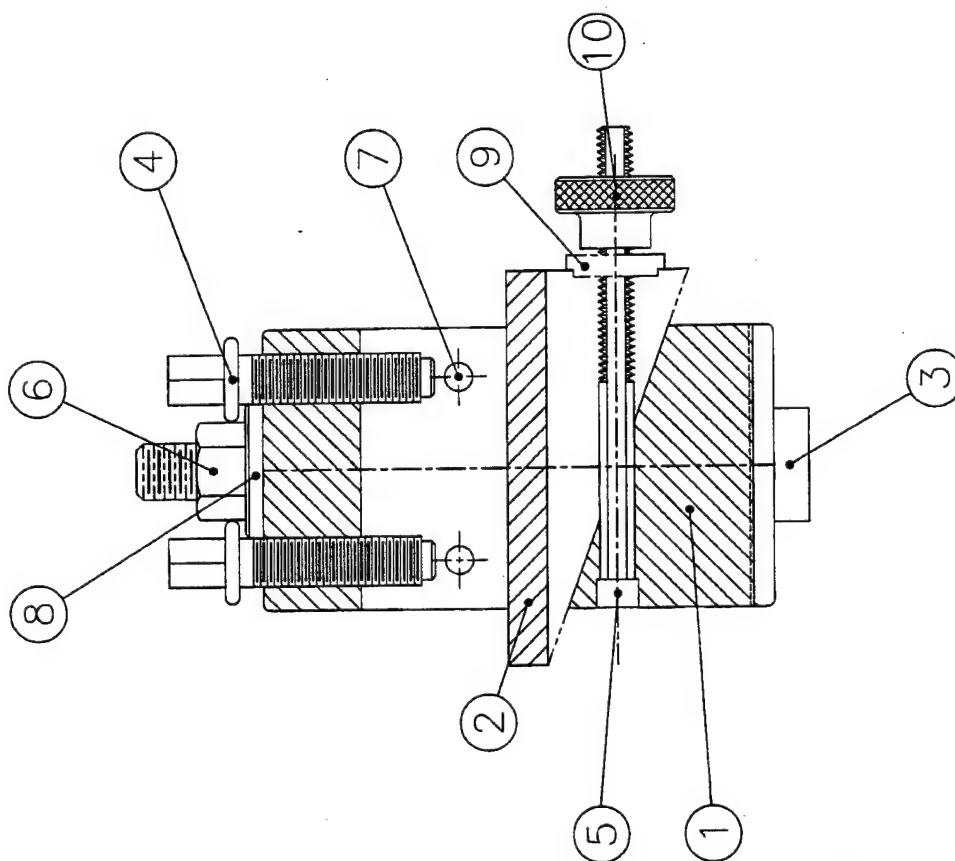
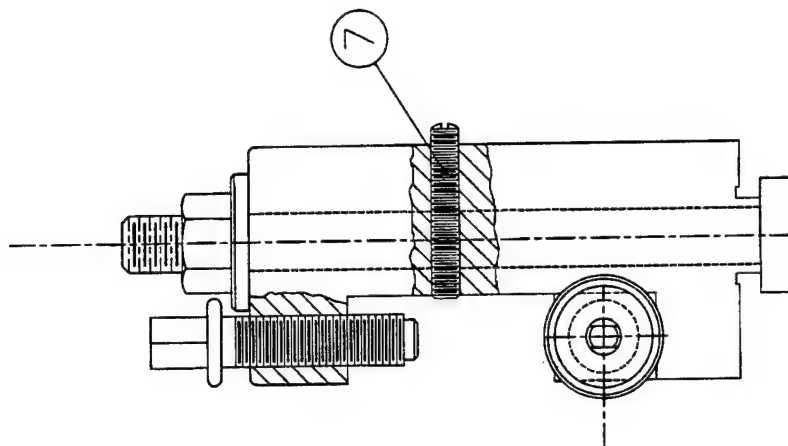


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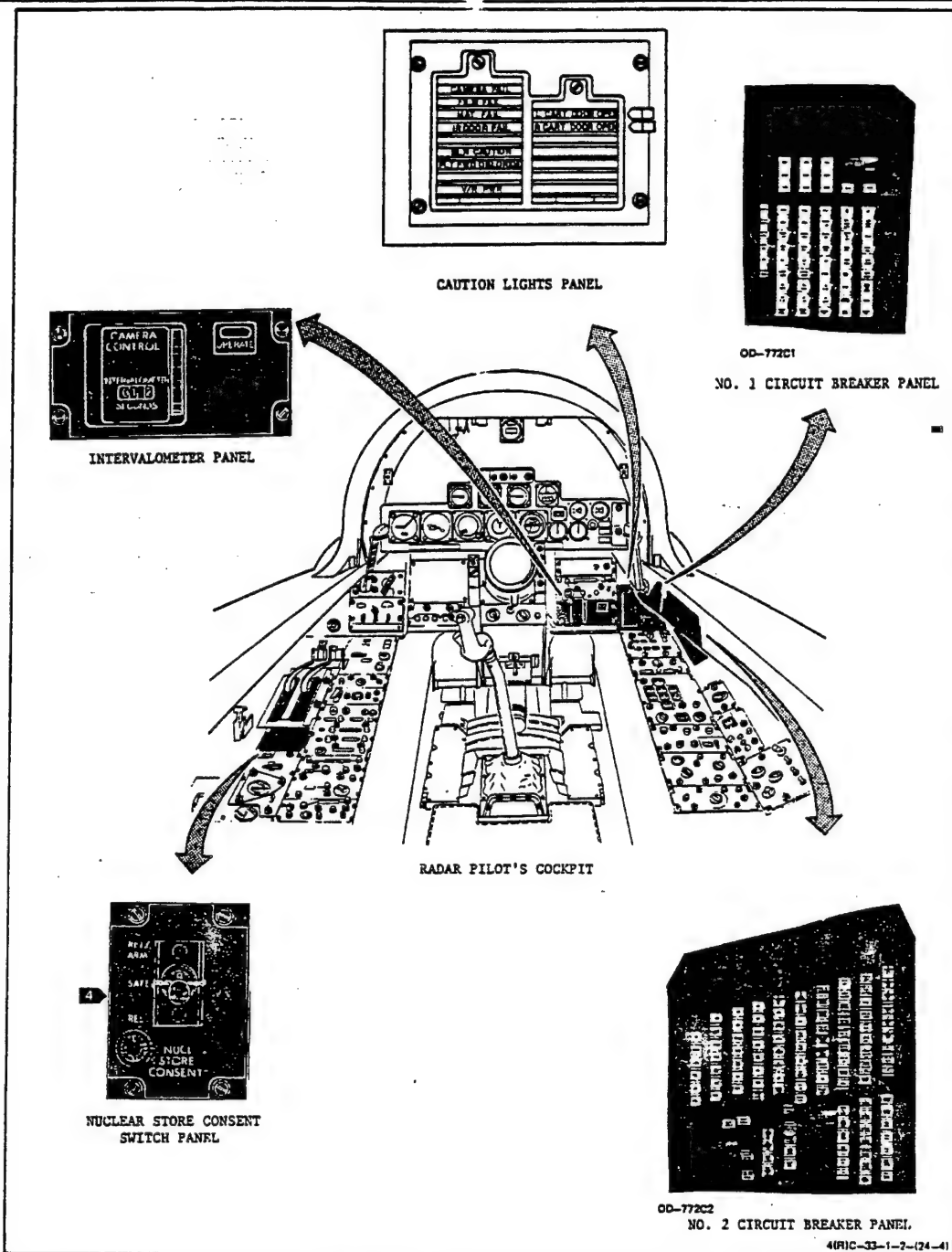
**10.1.6 D001R005**





## **10.2 HiJaak/Ventura**

### **10.2.1 D001R001**



D001R001

**10.2.2 D001R002**

T.O. 1F-4(R)C-33-1-2

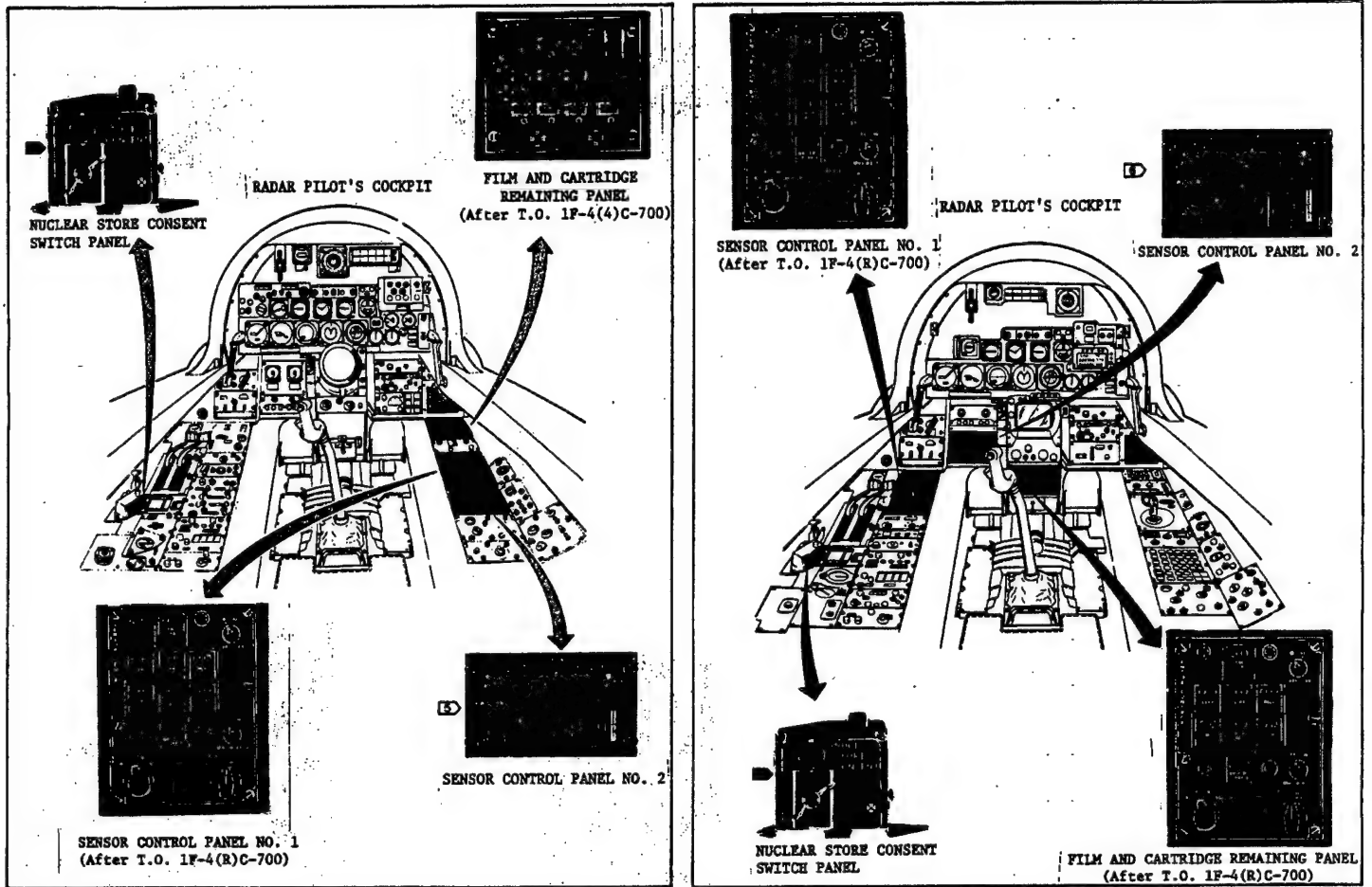


Figure 1-1. Armament Systems Panels, Controls and Indicator (Sheet 3 of 4)

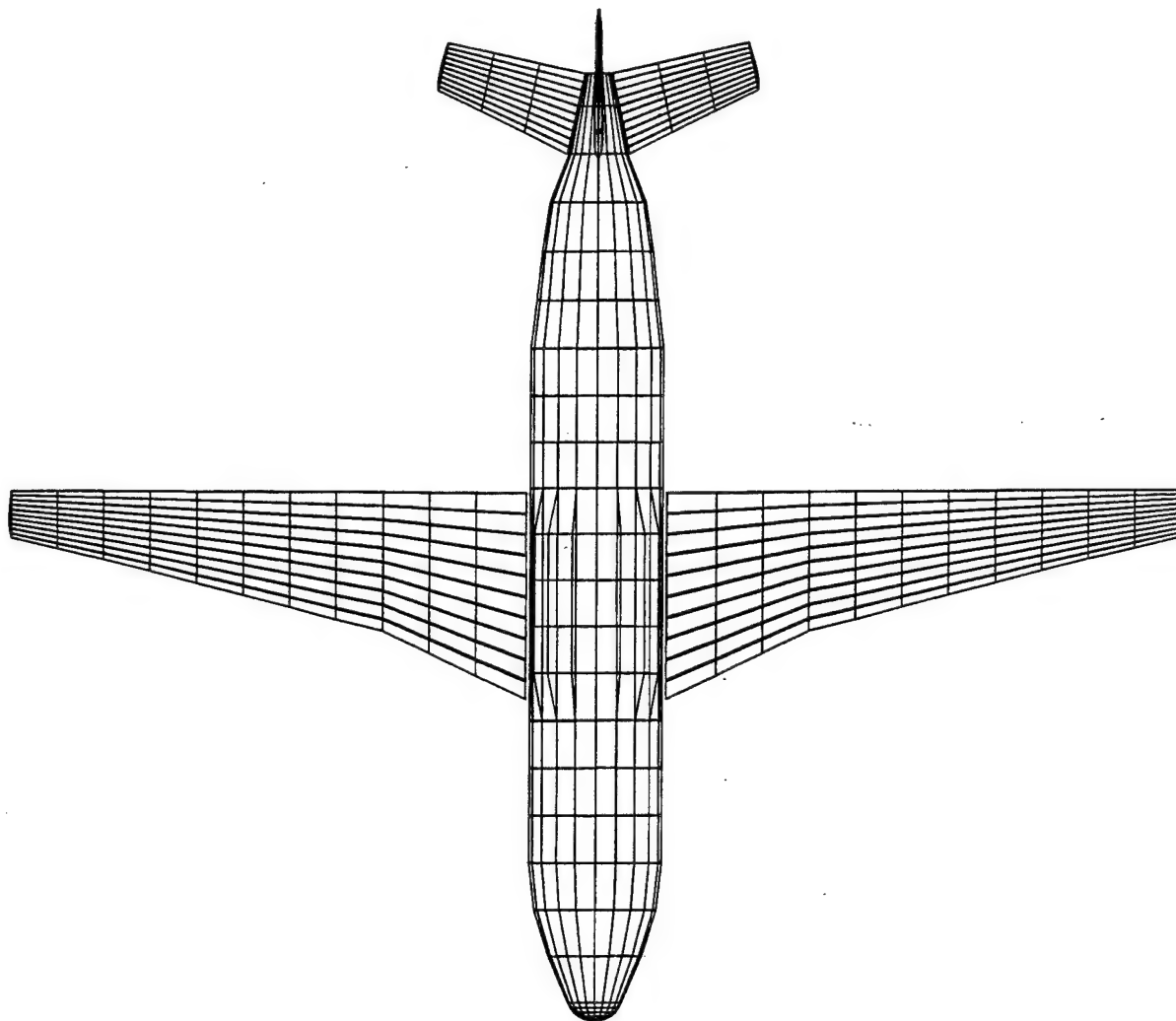
1-8

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### **10.2.3 D001R003**

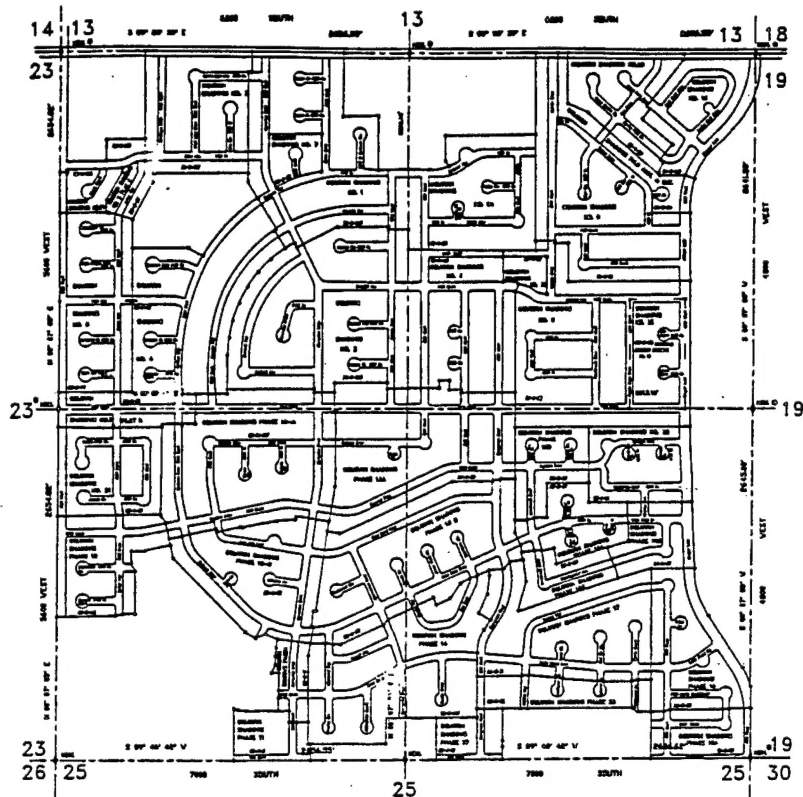


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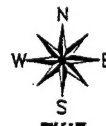
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#### **10.2.4 D001R004**



SEC 24  
T2S R2W  
AREA REFERENCE PLAT  
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SALT LAKE COUNTY SURVEYOR



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24 T2S R2W

D001R004



**10.2.5 D001R005**

